

# > CONVERGED VOICE AND DATA SOLUTION REVOLUTIONISES EFFICIENCY AND PRODUCTIVITY FOR FE COLLEGE

The Nortel logo consists of the word "NORTEL" in a bold, white, sans-serif font. The letter "O" is stylized with a white circular graphic element that overlaps it, creating a sense of motion or connectivity.

## Case Study

### Clydebank College

"We chose the provider whose proposal most closely matched our requirements and whose technology we considered to be the best for the job. They proposed the best solution, which seemed to have something more to offer. Telephony is Nortel's natural skill set."

> **David Black,**  
**IT Manager,**  
**Clydebank College**

**Customer:** Clydebank College

**Country:** UK

**Industry:** Education

**Challenge:** To equip the college for 21st century teaching and learning by improving communication, productivity and efficiency.

**Solution:** A new data network built upon the Nortel Ethernet Routing Switch 8600 and 5520s, delivering gigabit Ethernet to the desktop for all users. Includes a complete wireless LAN using Nortel WLAN 2380 switches and Nortel WLAN 2330 multi-mode access points. For IP telephony, a Nortel Communication Server 1000 with CallPilot for UM was installed, with a mix of handsets including Nortel IP Phone 1120s and 1140s, IP Softphone 2050, plus Nortel WLAN Handset 2210s and 2211s.

- Benefits:**
- **Flexibility and scalability** – IP solution allows staff to work anywhere on campus and also supports future growth and technology developments
  - **Improved efficiency and responsiveness** – UM capability allows staff to access voicemail messages via their email inbox
  - **Better access to information for students** – via dedicated student log-in to college LAN



“The equipment and the design of the system makes it easy to switch new things on. We wanted to ensure that we were fully equipped for the future and that additional services could be provided simply and easily if required.”

> David Black, IT Manager,  
Clydebank College



## The scenario

Since it opened its doors as a technical college in 1965, Clydebank College has changed dramatically. It was created to support the training of apprentices in local manufacturing companies and shipyards, but now supports more than 10,000 students each year from over 40 countries.

When Clydebank College moved into a state-of-the-art, purpose-built riverside campus at Queens' Quay, it heralded a new era for the college. Not only a new estate and facilities, but also a new commitment to helping all learners realise their ambitions.

As part of the move and this commitment to students, the time had come to implement a fully-converged network infrastructure that would help take the college into the 21st century. With the vision to create a first-class teaching and learning environment at the new campus, Clydebank College was looking for a solution that would underpin student and staff services by delivering highly reliable, fast and highly secure voice and data communications, whilst also providing a scalable platform for future growth.

The college wanted to harness the latest IP technology to create a sophisticated yet flexible communications solution. One which would deliver data services for up to 10,000 students and 300 staff, plus IP telephony capability for staff as well. In addition, they wanted a complete wireless network, including wireless IP telephony for IT staff, and a full Unified Messaging solution in order to improve efficiency.

To enable Clydebank College to identify the correct solution provider and the right technology, a full OGC (Office of Government Commerce) tender process was carried out, as IT Manager David Black explains:

“We chose the provider whose proposal most closely matched our requirements and whose technology we considered to be the best for the job. Having looked at all of the industry-leading manufacturers, we selected Nortel because they proposed the best solution, which seemed to have something more to offer. Telephony is their natural skill set.”

## The solution

With the brief to provide the college with a platform for first-class teaching and learning, the initial focus was to create a suitable network backbone. To provide the level of reliability and scalability that the college was looking for, a complete Nortel data network was implemented. This included a Nortel Ethernet Routing Switch 8600 at the core, with Nortel Ethernet Routing Switch 5520s at the edge, delivering gigabit Ethernet to the desktop for all users.

To extend the network's coverage for staff, a complete Nortel Wireless LAN infrastructure was also put in place using Nortel WLAN 2380 switches and Nortel WLAN 2330 multi-mode access points. This allows staff to log on to the network using their laptops from anywhere within the campus, and also allows them to make telephone calls using IP Softphone 2050. In addition, the wireless network is also capable of supporting students and guests in the future if required.

For the telephony side of the solution, a Nortel Communication Server 1000 was installed, with CallPilot for voicemail and Unified Messaging. A mix of handsets including Nortel IP Phone 1120s and 1140s, plus Nortel WLAN Phone 2210s and 2211s were also included. This gives all staff a DDI number and voicemail, as well as UM capability so that voicemail messages are also displayed in their email inbox.

Clydebank College is in the process of refurbishing new premises at its Dumbarton site, where a further 20 staff members will be based, as David continues. "One of the key requirements of the system for us was that it would be extendable. With the new site opening soon, we have linked this to the main site using a 10Mb LES circuit to extend both the LAN and the IP telephony capability, creating a complete communications network."

College lecturers have also been given access to the system's virtual office functionality, which means that they can log on to their phone from anywhere – at their desk, in a workroom, via the Softphone on their laptops or even at the Dumbarton site. This enables them to make and receive calls using their main DDI as well as accessing voicemails and all of their directories and preferences, regardless of where they are working on any given day.

## The results

The new Nortel solution has transformed the way that staff and students communicate on a daily basis. Students can log in to their area of the college's LAN in order to access email, course notes, timetables and so on – whilst staff have full wireless access to the LAN and full use of IP telephony and all its benefits.

IT staff who are constantly mobile around the premises also have wireless IP handsets and this solution may be rolled out to additional staff members as well. David also has the option to give students and guests access to the wireless network in the future if required, as he explains:

"The equipment and the design of the system make it easy to switch new things on. We wanted to ensure that we were fully equipped for the future and that additional services could be provided simply and easily if required. The ability to offer wireless access for students and for visitors is a key example of this."

The new technology which Clydebank College has implemented will improve the learning environment for students, whilst also simplifying the working lives of the staff. In particular, the new Unified Messaging solution not only improves efficiency but also enables staff to be more responsive, as they can easily see when someone has tried to contact them, whether by phone or email, just by looking at their email inbox.

"We are very happy with the Nortel solution," concludes David. "Which is why we have been more than willing to be used as a reference site for other FE colleges. We are able to show off elements of the solution which would work for them also."

"Our old system had completely run out of capacity and I often had three or four people sharing a single phone. But now I have 300 staff each with phones on their desks, a DDI, an IP Softphone on their laptops and the Unified Messaging capability. It's all integrated and it just works! We're delighted."

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"We were very excited about benefits which this project would bring. With Nortel's proven ability to provide the education sector with the very best ICT solutions, we knew our new campus would boast a resilient yet flexible learning infrastructure, fit for 21st century teaching and learning."

> David Black, IT Manager,  
Clydebank College

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